

## 12-step Approaches to Addiction Treatment:

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## Goals for this talk

- Present some of the evidence concerning efficacy/effectiveness of 12-step treatments
- Describe examples of 12-step treatments
- Discuss what is known about how 12-step treatments work
- Consider the use of 12-step programs and 12-step treatments by individuals with co-occurring psychiatric disorders

## What is 12-step treatment?

- A general philosophy of treatment (consistent with that of 12-step programs)
- A treatment program based on that philosophy
- A manualized therapy used in a research or treatment setting.

## History

- Addiction treatment in the US has long been dominated by the 12-step approach.
- However, the approach was considered unscientific in academic circles because of its origins and the lack of controlled clinical trials.

## Project MATCH

- 1,726 participants with alcohol abuse or dependence (
- 5 outpatient sites (n = 952), 6 aftercare sites (n = 774)
- Three treatment conditions, each with extensive training, supervision, and fidelity monitoring.
- Treatment conducted over 3 months
- Outcomes assessed at end of treatment and 1 yr after treatment (and at 3 years in outpatient group).

Project MATCH Research Group (1997). Matching alcoholism treatments to client heterogeneity: Project MATCH posttreatment drinking outcomes. *Journal of Studies on Alcohol* 58:7-29.  
Project MATCH Research Group (1998a). Matching alcoholism treatments to client heterogeneity: Project MATCH three-year drinking outcomes. *Alcoholism: Clinical & Experimental Research* 22:1300-1311.  
Project MATCH Research Group (1998b). Matching alcoholism treatments to client heterogeneity: Treatment main effects and matching effects on drinking during treatment. *Journal of Studies on Alcohol*.

## Cognitive Behavioral Therapy: 12 sessions over 12 weeks



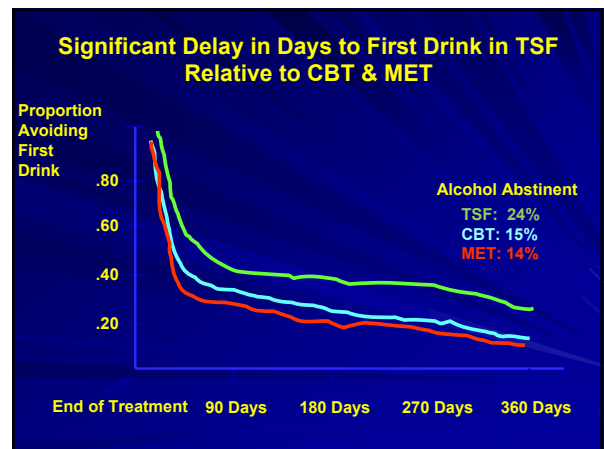
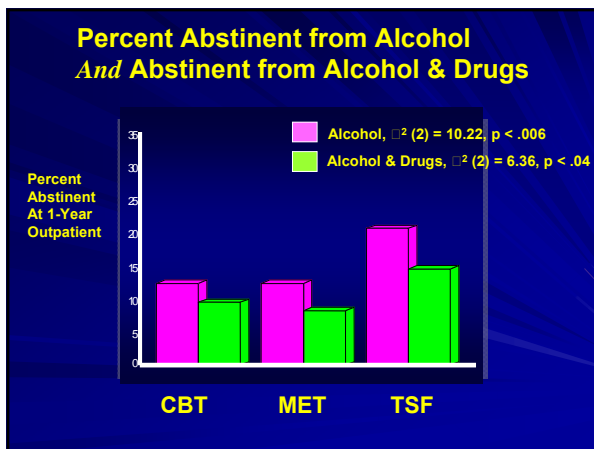


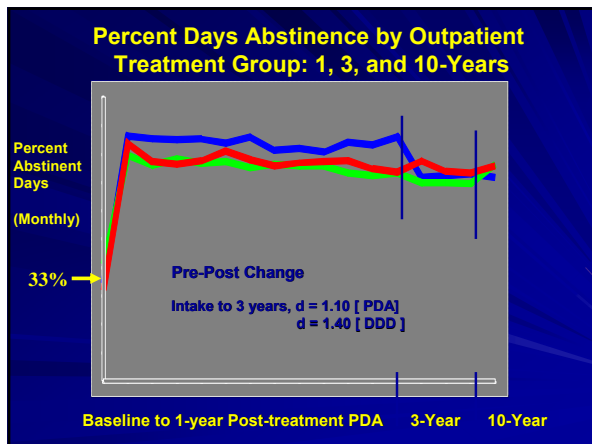
**MATCH findings: main effects**

- Outpatients during treatment: abstinence or moderate drinking more likely if they received CBT or TSF rather than MET (41% vs. 28%).
- Outpatients one year after treatment: three groups were similar, but two variables favored the TSF treatment: Higher sustained abstinence, lower relapse to heavy drinking after treatment.
- Outpatients at the three year follow-up: 3-month sustained abstinence still higher in TSF group, and PDA also higher.

**MATCH findings: matching effects**

- At 1-year follow-up: patients who had low levels of psychiatric symptoms had more days of abstinence if they had received the TSF rather than the CBT treatment .
- At 1-year follow-up, aftercare group: patients with higher levels of alcohol dependence had better outcomes with TSF, but patients who were low in alcohol dependence had better outcomes with CBT.
- Outpatients at 3-year follow-up: participants whose social networks were highly supportive of their drinking had better outcomes if they received TSF rather than MET treatment.





- NIDA Collaborative Cocaine Treatment Study:  
(Crisis-Christoph, Siqueland, et al. 1999).
- 487 participants randomly assigned to
    - IDC (12-step model) plus GDC
    - Supportive-expressive therapy plus GDC
    - Cognitive therapy plus GDC
    - GDC alone
  - 6 months active treatment (individual 2x/wk for 12 weeks, 1x/wk for 12 weeks)
  - IDC plus GDC had superior outcomes (ASI drug composite and cocaine use) over 12 months of assessment.

- ### Group model: MAAEZ (Kaskutas et al. 2009)
- 508 participants recruited from outpatient and residential programs
  - OFF/ON (sequential cohort) design
  - In ON condition, 6 MAAEZ session replaced 6 usual-care 12-step education sessions.
  - At 12 months, participants receiving MAAEZ had higher rates of abstinence from alcohol (89.1% vs. 71.5%) and drugs (91.8% vs. 83.3%).

- ### Naturalistic VA Studies
- 3698 male veterans
  - 15 treatment programs: 12-step vs. cognitive behavioral vs. “eclectic”
  - Participants in 12-step oriented programs had 50% higher abstinence rates at 1 year;
  - Attended more AA;
  - Had lower treatment costs.
- Moos et al. 1999; Ouimette, Finney et al., 1997; Humphreys & Moos, 2001

## Description of 12-step approaches

- ### Twelve-Step Treatment Philosophy:
- Adheres to the concepts and beliefs set forth in Alcoholics Anonymous (AA). The overall goal of TSF is to facilitate the long-term engagement of clients into the fellowship of AA.
- Alcoholism is a progressive illness that affects the body, mind, and spirit.
  - Alcoholism is characterized by a complete loss of control over drinking that, if unarrested, will result in death or insanity.
  - The only effective remedy is *total abstinence* (from mood altering substances).

### Project MATCH TSF

<http://lib.adai.washington.edu/pubs/matchmonograph1.htm>  
 12 weeks/12 individual sessions

- 4 core topics
  - Program Introduction
  - Step 1-Acceptance
  - Steps 2 and 3-Surrender
  - Getting Active
- 6 elective topics
  - Genograms
  - Enabling
  - People, Places, and Things
  - HALT (Hungry, Angry, Lonely, and Tired)
  - Steps 4 and 5-Moral Inventories
  - Sober Living
- 2 optional conjoint sessions
- Termination session

### NIDA Individual Drug Counseling

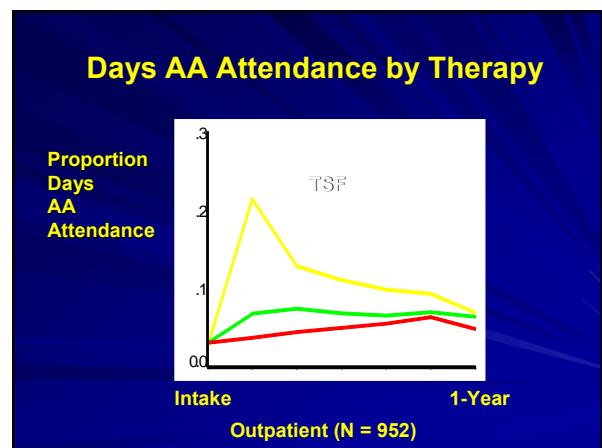
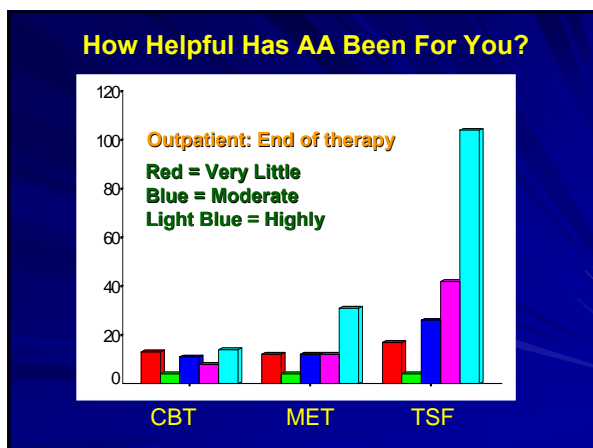
<http://archives.drugabuse.gov/txmanuals/idca/IDCA1.html>

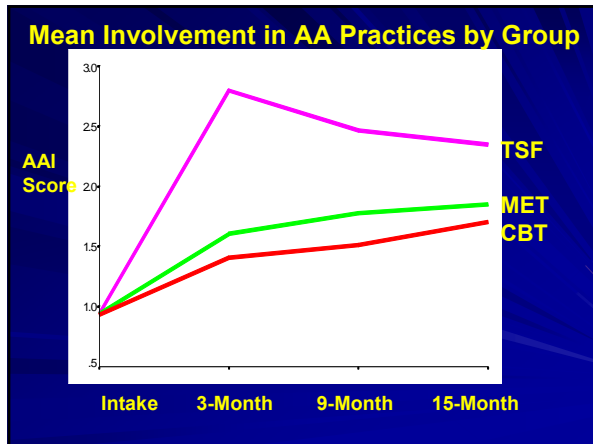
- Organized into 4 phases
  - Treatment Initiation
  - Early Abstinence
  - Maintenance of Abstinence
  - Advanced Recovery
- Uses the 12-step model of recovery and strongly encourages 12-step participation
- Also includes other elements such as
  - Monitoring
  - Addressing craving
  - Coping skills/problem solving

### MAAEZ Model

- Six structured 90-min. group sessions (plus homework) led by counselors who are active 12-step participants.
  - Introductory session
  - 4 core sessions
    - Spirituality
    - Principles Not Personalities
    - Sponsorship
    - Living Sober
  - Repeat introductory session

How does 12-step treatment work?





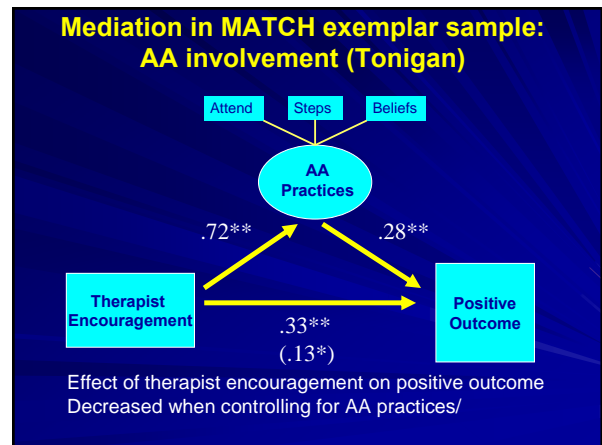
### Relationship Between AA Attendance and Drinking: Outpatient

	PDA	DDD
AA During Therapy	.22 **	-.20 **
Three Months After Therapy	.23**	-.20 **

### “Active ingredients” of TSF in Project MATCH outpatient sample

- Abstinence emphasis did not account for the effects of treatment assignment on abstinence.
- Emphasis on AA participation predicted AA engagement, which accounted for some of the effects of TSF on abstinence.
- Emphasis on spirituality resulted in higher “God consciousness” in TSF participants, but this was unrelated to drinking outcomes.

Longabaugh, R., D. M. Donovan, et al. (2005). “Active ingredients: how and why evidence-based alcohol behavioral treatment interventions work.” *Alcohol Clin Exp Res* 29(2): 235-247.



### Spirituality as a Moderating Variable

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Central Questions are:

Does pre-treatment spiritual belief moderate the acceptability and effectiveness of spiritual-based treatment?

Does pre-treatment spiritual belief moderate engagement in mutual-help after treatment?

### Pre-AA spiritual beliefs of major concern in “core” AA literature

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Chapter, *We Agnostics*

“Suffering from an illness which only a spiritual experience will conquer.... To one who feels he is an atheist or agnostic such an experience seems impossible, ... To be doomed to an alcoholic death or to live on a spiritual basis are not always easy alternatives to face.” (p 44)

## Spirituality in Project MATCH

- TSF produced greater change in God beliefs.
- Atheists and Agnostics were less likely to attend and sustain AA attendance.
- All groups benefitted similarly from AA involvement.
- Substance use outcomes were similar in all groups except for worse outcomes in the "Unsure" group.

Tonigan, J. S., W. R. Miller, et al. (2002). "Atheists, agnostics and Alcoholics Anonymous." *J. Stud Alcohol* 63(5): 534-541.

## Correlations (N) Between AA Attendance and Two Measures of Drinking by God Belief Category at Follow-up

	Follow-up Months 1-6	
	PDA	DDD
Atheist (34)	.27	-.28
Agnostic (79)	.17	-.18
Unsure (152)	.25	-.19
Spiritual (903)	.29	-.26
Religious (406)	.26	-.23
$R_w$	.27*	-.24
Q Statistic	Q (4) = 1.45, p < .83	Q (4) = 1.26, p < .87

## 12-step programs and treatment for the dually diagnosed

## Special Issues Complicating the Use of 12-step Programs by DDI

- Symptoms may interfere with attendance.
- DDI may feel and be treated as different and not belonging.
- Conflicts around the use of medication.
- Traditional 12-step programs do not address challenges posed by mental illness.
- There is some disagreement about the magnitude of these problems, but it is probably larger for those with SMI, particularly schizophrenia.

## Special Issues: Empirical Studies

- Most DDI comfortable with tenets of AA (*Pristach and Smith 1999*).
- Illness-specific experiences associated with low 12-step attendance (*Bogenschutz and Akin 2000*).
- DDI experience barriers related to use of medication and participation in groups. (*Jordan, Davidson et al. 2002*).

## Effects of Psychiatric Symptoms on 12-step Attendance

- DDI attend 12-step programs at rates comparable to non-DDI (*Westermeyer and Schneekloth 1999; Pristach and Smith 1999; Bogenschutz and Akin 2000; Jordan, Davidson et al. 2002; Kelly, McKellar et al. 2003; Timko et al. 2010*).
- Attendance appear to be somewhat lower for those with psychotic disorders (*Tomasson and Vaglum 1998; Bogenschutz and Akin 2000; Jordan, Davidson et al. 2002*) and possibly social phobia (*Myrick and Brady 1997*).

## Do psychiatric symptoms moderate effects of 12-step participation on substance use outcomes?

- Large VA studies showing association of 12-step involvement and improved abstinence rates (*Ouimette, Moos et al. 1998; Ritscher, McKellar et al. 2002*), “adaptive coping” (*Moggi, Ouimette et al. 1999*), level of distress (*Ouimette, Humphreys et al. 2001; Ouimette, Ahrens et al. 1998*) in various populations.
- DDI improved as much in 12-step as in cognitive behavioral treatment (*Ouimette, Finney et al. 1997; Ouimette, Gima et al. 1999*).
- No matching effect for psychiatric severity (*Ouimette, Finney et al. 1999; Finney, Ouimette et al. 2001*).

## But...

- Exceptions:
  - One study reported no association between 12-step attendance and psychiatric outcome (*Dinitto, Webb et al. 2001*).
  - One study found smaller effect of 12-step in MDD-SUD patients than in patients with SUD alone (*Kelly, McKellar et al. 2003*).
  - Recent study reported weaker association between 12-step participation and positive outcome among dually diagnosed VA patients (*Timko et al. 2010*)

## Specialized 12-step programs for DDI

- Include DRA, DTR and others.
- Based on the 12 steps of AA, modified to include mental illness/disorder.
- Aim to provide “a safe environment where clients can discuss the issues of mental disorders, medication, medication side effects, psychiatric hospitalizations and experiences with the mental health system openly, without shame or stigma.” (*DTR, 1998*).
- Most of the empirical literature concerns DTR and has come out in the past 10 years.

## Empirical Findings Concerning Specialized 12-step Programs

- Participants report DTR is helpful for supporting abstinence and recovery from MI (*Vogel, Knight et al. 1998*).
- Mental illness perceived as less of a barrier to participation in DTR (*Bogenschutz, Vigil et al. 2002*).
- DTR attendance associate with abstinence over 2 years of follow-up (*Laudet et al. 2004*).
- DTR attendance associated with improved medication compliance (*Magura, Laudet et al. 2002*).
- DDI use specialized and traditional 12-step programs differently and for different purposes (*Laudet, Magura et al. 2003*).

## 12-step treatment for the dually diagnosed

## VA Outcome Studies

- DDI improved as much in 12-step as in cognitive behavioral treatment (*Ouimette, Finney et al. 1997; Ouimette, Gima et al. 1999*).
- No matching effect for psychiatric severity (*Ouimette, Finney et al. 1999; Finney, Ouimette et al. 2001*).
- 12-step during inpatient treatment associated with lower readmission rates (*Swindle, Phibbs et al. 1995*).
- 12-step residential outcomes equivalent to PSR and TC approaches (*Moos, Moos et al. 1999*).

## Controlled Trials

- *Jerrell and Ridgely 1995*
  - 132 DDI who were treated with CBT, intensive case management, or a 12-step control condition.
  - Better outcomes for CBT and case management.
  - Methodological limitations: partial randomization, non-manualized treatment, inconsistent implementation, baseline differences, lack of quantitative measures.

## Controlled Trials

- *Brooks and Penn 2003*
  - 70 DDI (SMI) patients received 12-step vs. SMART.
  - Patients receiving the 12-step intervention had better outcomes for substance use and social interaction, but health, psychiatric, and employment status improved more in the cognitive behavioral condition.

## Controlled Trials

- *McKay, Pettinati et al. 2002*
  - 132 Cocaine dependent patients with and without comorbid depression randomized to Relapse Prevention vs. 12-step group counseling.
  - No main effect or treatment\*depression interaction.

## Quasi-experimental trial

- DTR was added to a day treatment program in a consecutive cohort design.
- At 6 months, those exposed to DTR had
  - Fewer days of alcohol and drug use
  - Greater traditional 12-step attendance
  - Greater medication adherence
- Interesting study blurs the boundary between treatment and mutual help.

Magura, S., A. Rosenblum, et al. (2008)